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A Coalfield Reinvestment Formula for the Grand Canyon State

Arizona Public Service ($286.2 million), Salt River Project ($247.8 million), Tucson Electric Power ($151.2 million), Arizona Power Electric Co-Op ($40.8 million)

Executive Summary

Arizona's coalfield communities are confronting an existential crisis today as aging plants and the mines that supply them close.

These communities are part of the overall economy of greater Arizona, and their perilous state—combined with the broader economic trauma now engulfing the U.S.—presents an immediate opening for local reinvestment by Arizona utility companies that have relied on power plants, like Navajo Generating Station and Four Corners Generating Station, to name just two, for the electricity that has powered the phenomenal growth of Arizona for 50 years. Power-generation communities like Page, Springerville, Kayenta and others (see the map below) that hosted the plants and their companion mines are facing crushing economic effects from closures.

Changes sweeping power markets are a regional, national and global phenomenon, driven by inescapable market forces that will favor cheaper but still profitable forms of generation in the short and long term alike. Arizona, if it doesn't reinvest seriously in its traditional power-generation communities, risks missing out on an opportunity now to position itself as a regional energy industry leader.

A Reinvestment Formula

The Navajo Nation, which encompasses a good part of the coalfield economy of greater Arizona, has put forth a formula in a rate-case hearing before the Arizona Corporation Commission by which Tucson Electric Power (TEP) can invest responsibly now in the void left by the closure last year of the Navajo Generating Station and its coal source, the Kayenta Mine.

The Navajo formula is elegant, simple, and fair, calling for $100,000 of initial local

utility-company reinvestment for every megawatt of power capacity owned currently and in prior years (the Hopi tribal government, similarly affected, has endorsed the Navajo proposal). This brief applies the Navajo approach to all of TEP's coal-fired power holdings and to those of the two largest utility companies in Arizona, Salt River Project (SRP) and Arizona Public Service (APS), and to the Arizona Electric Power Co-op.

This initial reinvestment would total $726 million, dedicated proportionally by company and in the best economic interest of Arizonans across the board, replacing lost tax revenues and jobs while driving power sector modernization.

Under the formula:

- APS would reinvest $271.6 million locally for the generation capacity it has owned over the years, including in Navajo Generating Station, Cholla Power Plant and the Four Corners Power Plant.
- SRP would reinvest $247.7 million locally for its ownership interests in Navajo Generating Station, Coronado Generating Station, Springerville Generating Station and Four Corners Power Plant.
- TEP would reinvest $151.4 million locally for the power its ownership stakes at Springerville Generating Station, San Juan Generating Station, Navajo Generating Station, and Four Corners Power Plant.
- Arizona Electric Power Co-Op would reinvest $40.8 million locally for its ownership of the Apache Generating Station.

Navajo and Hopi communities make up the heart of coalfield Arizona but are by no means the only places where utility company coalfield reinvestment can and should occur immediately. Arizona's big three utilities specifically have relied on non-tribal communities in eastern Arizona, and they also have depended on coalfield communities in northwest New Mexico, an area that can unquestionably be considered part of the greater Arizona power-generation economy.

All the communities in question have skilled work forces and ample transmission infrastructure for power generation reinvestment.

Reinvestment can occur in numerous other ways, too, as described in an IEEFA report published in February (*The Case (and the Mechanisms) for Utility-Company Reinvestment in Arizona's Coalfield Communities*).

Arizona has the policy levers now to drive utility-company reinvestment across the greater Arizona coalfield economy, policy levers that are described in detail in that same report. This brief focuses on describing a broad formula by which utility-company reinvestment can begin now across coalfield greater Arizona. These are not meant to be final reinvestment figures, rather, they suggest a beginning point—one that Arizona's utilities are more than capable of funding.

Applying the Formula

Coalfield economies across greater Arizona are ripe for reinvestment. They include, most immediately, the communities around the former Navajo Generating Station and Kayenta Mine, both of which closed a few months ago. They also include the communities around Four Corners Power Plant and San Juan Generating Station in northwest New Mexico, aging coal-fired plants that are scheduled for shutdown. The other corners of coalfield Arizona are at risk, as well, including communities near coal-fired plants that include Coronado Generating Station, Cholla Power Plant, Springerville Generating Station and Apache Generating Station.

All of these plants are owned or co-owned by the Arizona utility interests mentioned in this report: Arizona Public Service (a subsidiary of Pinnacle West Capital Corp.), Salt River Project (a non-profit company), Tucson Electric Power (a subsidiary of Fortis Inc.), and Arizona Electric Power Co-Op, which is member-owned. The following tables show how the Nez formula would apply to coal-fired holdings owned or co-owned by APS, SRP, AEP and Arizona Electric Power Co-Op.

UTILITY	COAL PLANT	OWNED CAPACITY Current and historical, as a percent of total	Megawatts	REINVESTMENT $100,000 per MW of ownership
Arizona Public Service Total reinvestment: **$271.6 million**	**Navajo Generating Station** 2,409 MW total nameplate capacity, all retired in 2019	**14.0%**	**337.3**	**$33.7 million**
	Cholla Power Plant 1,128.8 MW total nameplate capacity; 288.9 MW retired	**50.7% of 839.9 MW** currently operating; **100% of 288.9 MW** retired in 2015	**714.7**	**$71.5 million**
	Four Corners Power Plant 2,269.6 MW total nameplate capacity; 633.4 MW retired	**63.0% of 1,636.2 MW** currently operating; **100% of 633.4 MW** retired in 2013	**1,664.2**	**$166.4 million**
Salt River Project Total reinvestment: **$247.7 million**	**Navajo Generating Station** 2,409 MW total nameplate capacity, all retired in 2019	**42.9%**	**1,033.5**	**$103.3 million**
	Coronado Generating Station 821.8 MW total nameplate capacity	**100%**	**821.8**	**$82.2 million**
	Spingerville Generating Station 1,765.8 MW total nameplate capacity	**25.9%**	**458.1**	**$45.8 million**
	Four Corners Power Plant 2,269.6 MW total nameplate capacity; 633.4 MW retired	**10.0% of 1,636.2 MW** currently operating	**163.6**	**$16.4 million**

UTILITY	COAL PLANT	OWNED CAPACITY Current and historical, as a percent of total	Megawatts	REINVESTMENT $100,000 per MW of ownership
Tucson Electric Power Total reinvestment: **$151.4 million**	**Navajo Generating Station** 2,409 MW total nameplate capacity, all retired in 2019	**7.5%**	**180.7**	**$18.1 million**
	Spingerville Generating Station 1,765.8 MW total nameplate capacity	**48.1%**	**849.3**	**$84.9 million**
	Four Corners Power Plant 2,269.6 MW total nameplate capacity; 633.4 MW retired	**7.0% of 1,636.2 MW** currently operating	**114.5**	**$11.4 million**
	San Juan Generating Station 1,848 MW total nameplate capacity; 924 MW retired	**50.0% of 369 MW** currently operating; **50.0% of 369 MW** retired in 2017	**369.0**	**$36.9 million**
Arizona Power Electric Co-op Total reinvestment: **$40.8 million**	**Apache Generating Station** 408 MW total nameplate capacity; 204 MW converted from coal to gas in 2017	**100%**	**408.0**	**$40.8 million**

Reinvestment Initiatives Are Occurring Elsewhere

Case Studies from Colorado, Washington, and Germany

Nothing about what is happening to the coalfield communities of greater Arizona is occurring in isolation. The American coal industry is collapsing across the board as momentum gathers around market forces that favor other forms of power generation.

An IEEFA report published last month (*The Case (and the Mechanisms) for Utility-Company Reinvestment in Arizona's Coalfield Communities*) describes how reinvestment initiatives have taken root elsewhere, perhaps most notably around the closure of the Centralia Power Plant in Washington state, where a $55 million reinvestment initiative is proceeding; around the rolling closure of Comanche Generating Station in Pueblo, Colo., where Xcel Energy has gained regulatory approval to reinvest $2.5 billion in the area; and through a national program in Germany, where a $45 billion national coalfield reinvestment is in progress.

Arizona utility companies can follow—or can be made to follow—these examples in a way that ensures reinvestment on a similar, responsible scale across the coalfield communities of greater Arizona, all of which are open for reinvestment now and for the foreseeable future.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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